



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Rogers Brothers Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT OF JULY 1, 1930, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

GARDEN BEAN

'Burly'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 17th day of June in the year of our Lord one thousand nine hundred and eighty-two.

Attest:

*Kenneth A. Evans*  
Acting  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

*John R. Block*  
Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED  
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY GP 72115		1b. VARIETY NAME BURLY		FOR OFFICIAL USE ONLY PV NUMBER 8100032	
2. KIND NAME Garden Snap Bean <i>wt 2/8/82</i>		3. GENUS AND SPECIES NAME Phaseolus vulgaris		FILING DATE 12/5/80	TIME 12:30 <b>P.M.</b>
4. FAMILY NAME (BOTANICAL) Leguminosae <i>wt 2/8/82</i>		5. DATE OF DETERMINATION Fall 1972		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 12/5/80 3/10/82
6. NAME OF APPLICANT(S) ROGERS BROTHERS SEED COMPANY		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 80 Idaho Falls, Idaho 83401		8. TELEPHONE AREA CODE AND NUMBER (208) 522-0143	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Delaware		11. DATE OF INCORPORATION Feb. 25, 1975	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Mr. Charles Green ROGERS BROTHERS SEED COMPANY P. O. Box 80, Idaho Falls, ID 83401					
13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:					
<input checked="" type="checkbox"/> 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
<input checked="" type="checkbox"/> 13B. Exhibit B, Novelty Statement.					
<input checked="" type="checkbox"/> 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)					
<input checked="" type="checkbox"/> 13D. Exhibit D, Additional Description of the Variety.					
14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO		14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED			
15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					
15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					
16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
<i>Nov. 6, 1980</i> (DATE)		<i>Charles Green</i> (SIGNATURE OF APPLICANT)			

## INSTRUCTIONS

**GENERAL:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

DEC 5 1980

BURLYEXHIBIT AORIGIN AND BREEDING HISTORY OF THE VARIETY

BURLY, an early to mid season, green podded garden bean was derived from the following hand-pollinated crosses.

\*

[Asgrow BBL #274 x (Harvester x OSU 412)] x

\*\*

[Asgrow BBL #274 x (Harvester hybrid x Gallatin 50)]

\* OSU 412 is a release of Oregon State University.

\*\* A complex cross which included Harvester and USDA B 2530-6-2-4

The above cross was made during the Fall of 1968 and the following series of selections were made:

<u>YEAR</u>	<u>GENERATION</u>	<u>FIELD PLOT</u>	<u>AMOUNT HARVESTED</u>
1969	f <sub>2</sub>	691303	3 single plants
1970	f <sub>3</sub>	701495	3 single plants
1970-71 (winter)	f <sub>4</sub>	(Greenhouse)	Single plants increased
1971	f <sub>5</sub>	711589	2# 2 oz. bulk; 2 singles
1972	f <sub>6</sub>	72115	Bulked; 3 singles

The increase from Plot 72115 was bulked and this was used as the seed source for subsequent increases toward the present production line. Pureline selections were made in the f<sub>7</sub> generation and these are being increased and evaluated. The most uniform of these lines will replace the initial line as soon as they can be increased to production quantities.

see Exh. A.  
supplement  
on next page  
cib

BURLY <sup>is</sup> [appears to be] genetically uniform and stable, with the exception of the occurrence of approximately one flat pod plant per 1400 and one string type rogue per 30,000 plants.

cib  
2/8/82  
per telephone  
conversation  
with Charles Green.

BURLY

EXHIBIT A

(Supplement)

The F<sub>7</sub> selection that will be used to replace the initial line is similar genetically to the initial line and will not change the essential features of the variety as described in this application.



BURLYEXHIBIT BDATA INDICATIVE OF NOVELTY

BURLY most closely resembles the bean variety, Greenpak, except BURLY produces up to 20% more pods that are larger than five sieve than is produced by Greenpak.

Following is a two year comparison of percent seed, percent fiber and sieve size breakdown for BURLY and Greenpak, data taken at optimum harvest maturity for each variety. [per Charles Green, 2/8/82].

	<u>YEAR</u>	<u>% SEED</u>	<u>% FIBER</u>	<u>1-3 SIEVE</u>	<u>4 SIEVE</u>	<u>5 SIEVE</u>	<u>6 or 7 SIEVE</u>
BURLY	1977	8.0	.007	11	19	29	41
	1978	6.6	.019	6	18	31	45
GREENPAK	1977	4.7	.003	20	38	32	10
	1978	4.1	.004	20	35	36	9

BURLY

EXHIBIT B

(Supplement)

Under normal growing conditions in Twin Falls, Idaho, the pods on BURLY reach prime harvest stage 2 days earlier than Greenpak and the average pod length of BURLY is 1 cm. shorter than Greenpak.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Bean)

OBJECTIVE DESCRIPTION OF VARIETY  
BEAN (*Phaseolus vulgaris* L.)

NAME OF APPLICANT(S)

ROGERS BROTHERS SEED COMPANY

ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)

P. O. Box 80

Idaho Falls, Idaho 83401

FOR OFFICIAL USE ONLY

PVPO NUMBER

8100032

VARIETY NAME OR TEMPORARY DESIGNATION

BURLY (GP 72115)

Place numbers in the boxes (e.g.   ) for the characters that best describe this variety. Measured data should be for SPACED PLANTS. Ranges may also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: \_\_\_\_\_ The location of test area is \_\_\_\_\_

Please answer questions appropriate for your variety if the information is available.

## 1. TYPE:

1 = Field (dry-edible)

2 = Garden

## 2. MARKET MATURITY (at Twin Falls, Idaho)

Days to edible pods

Days to green shells

Days to dry seeds

Heat units to edible pods

Heat units to green shells

Heat units to dry seeds

No. days earlier than

Same as ..

No. days later than

1 = Tendercrop  
3 = Kinghorn Wax  
5 = Michelite 62  
7 = Bush Blue Lake 290

2 = Kentucky Wonder  
4 = White Kidney  
6 = Dwarf Horticultural  
8 = Other (specify below)

## 3. PLANT:

1 = Determinate

2 = Indeterminate

cm height

cm shorter than

Same as ..

comparison variety from above

cm taller than

cm spread

Number primary branches near base

cm narrower than

width same as ..

comparison variety from above

Branching habit:

1 = compact 2 = open

cm wider than

Main stalk: 1 = brittle 2 = wirey

1 = stout 2 = thin

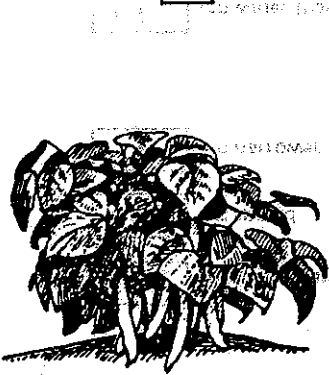
6



## 3. PLANT: (Cont'd)

☐ 3 Pod position: 1 = low 2 = high 3 = scattered

☐ 3 Bush form (illustrated below):



1 = spherical bush form



2 = stem bush form



3 = wide bush form



4 = high bush form

5 = other (specify) \_\_\_\_\_

## 4. LEAVES:

☐ 2 1 = smooth 2 = wrinkled

☐ 1 1 = dull 2 = glossy

☐ 2 Size: 1 = small (Earliwax) 2 = medium 3 = large (Tendercrop)

☐ 2 Color: 1 = light green (as light or lighter than Bountiful) 2 = medium green  
3 = dark green (as dark or darker than Bush Blue Lake 290)

## 5. FLOWERS:

☐ 1 Color: 1 = white 2 = cream 3 = pink 4 = lilac 5 = purple 6 = Other (specify) \_\_\_\_\_

☐ 4 ☐ 7 Days to 50% bloom

## 6. FRESH PODS: (Edible maturity, average for 20 pods)

☐ 3 Exterior color: 1 = light green (as light or lighter than Bountiful)  
2 = medium green  
3 = dark green (as dark or darker than Bush Blue Lake 290)  
4 = light yellow (Brittlewax)  
5 = golden yellow (Cherokee Wax)  
6 = green-red variegated (Horticultural)  
7 = other (specify) \_\_\_\_\_

## % Sieve size distribution at optimum maturity for non-flat pods

Note:

1 = 4.76 mm to 5.76 mm

4 = 8.34 mm to 9.53 mm

2 = 5.76 mm to 7.34 mm

5 = 9.53 mm to 10.72 mm

3 = 7.34 mm to 8.34 mm

6 = 10.72 mm or larger

1	2	3	4	5	6
			19	29	41



3 sieve ☐ 1 ☐ 0 cm length

☐ 0 ☐ 8 mm width

☐ 0 ☐ 9 mm thickness

4 sieve ☐ 1 ☐ 1 cm length

☐ 0 ☐ 9 mm width

☐ 1 ☐ 1 mm thickness

5 sieve ☐ 1 ☐ 3 cm length

☐ 1 ☐ 0 mm width

☐ 1 ☐ 2 mm thickness

6 sieve ☐ 1 ☐ 4 cm length

☐ 1 ☐ 0 mm width

☐ 1 ☐ 3 mm thickness

## 6. FRESH PODS: (Cont'd)

☐ 4 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart

☐ 1 Creaseback: 1 = present 2 = absent

☐ 3 Pubescence: 1 = none 2 = sparse 3 = considerable

☐ 2 Spur: 1 = straight 2 = slightly curved 3 = curved

☐ 2 Constrictions: 1 = none 2 = slight 3 = deep

☐ 3 Pod flesh: 1 = light 2 = medium 3 = dark

☐ 2 0 mm spur length

☐ 2 Fiber: 1 = none 2 = sparse 3 = considerable

☐ 5 Number of seeds per pod

☐ 1 Surface: 1 = smooth 2 = rough

☐ 2 Suture string: 1 = present 2 = absent

☐ 1 Seed development (Snap Bean): 1 = slow 2 = medium 3 = fast

☐ 1 Machine harvest: 1 = adapted 2 = not adapted

☐ 2 Pod flavor: (1) Standard (Tendercrop)  
(2) Mild Blue Lake (BBL 274)  
(3) Strong Blue Lake (Pole FM1)  
(4) Mild Romano (Roma)  
(5) Strong Romano (Pole Romano)  
(6) Other (specify) \_\_\_\_\_

## 7. SEED COAT COLOR:

☐ 1 1 = Monochrome 2 = Polychrome ☐ 1 = shiny 2 = dull

☐ 1 Primary color: 1 = white 2 = yellow 3 = buff 4 = tan

☐ - Secondary color: 5 = brown 6 = pink 7 = red 8 = purple  
9 = blue 10 = black 11 = other (specify) \_\_\_\_\_

☐ - Color Pattern: 1 = none 2 = splashed 3 = mottled 4 = striped 5 = flecked 6 = dotted

☐ - Secondary color location: 1 = hilar ring 2 = ventral surface  
3 = sides 4 = dorsal surface  
5 = not restricted to any area 6 = combination of location (specify below) \_\_\_\_\_

☐ - Hilar ring on colored seeds: 1 = absent 2 = narrow 3 = butterfly shaped

## 8. SEED SHAPE AND SIZE:

☐ 1 Hilum view: 1 = elliptical 2 = oval  
3 = round

☐ 4 Cross section: 1 = elliptical 2 = oval 3 = cordate  
4 = round

☐ 1 Side view:



1 = oval to oblong

2 = round

3 = reniform

8. SEED SHAPE AND SIZE: (Cont'd)

8100032

2

1 = truncate ends

2 = rounded ends

3

8

gm/100 seed

0

4

gm/100 seed lighter than

4

gm/100 seed same as

comparison variety from page one

0

8

gm/100 seed heavier than

1

9. ANTHOCYANIN: (1 = absent 2 = present)

1

Flowers

1

Stems

1

Pods

1

Seeds

1

Leaves

10. DISEASE RESISTANCE (0 = not tested 1 = susceptible 2 = resistant):

0

Anthrachnose (specify race below)

0

Fuscou blight

2

Rust (specify race below)

at Beltsville, MD - believed to be

Races #16 & #23

0

Red node virus

0

Powdery mildew

0

Pod mottle virus

0

Fusarium root rot

2

Bean common mosaic virus (specify strain below)

0

Pythium root rot

0

Mosaic mottle

0

Rhizoctonia root rot

0

Black root

0

Pythium wilt

0

Bean yellow mosaic virus

0

Angular leaf spot

1

Curly top

0

Bacterial wilt

Other (specify below)

0

Halo blight (specify race below)

11. INSECT RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

0

Aphids

0

Root knot nematode

0

Leaf hopper

0

Seed corn maggot

0

Lygus

0

Thrips

0

Pod borer

0

Weavils

Other (specify below)

12. PHYSIOLOGICAL RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

0

Heat

0

Cold

0

Drought

2

Air pollution (at Beltsville, MD)

13. COMMENTS:

DEC 5 1980

BURLYEXHIBIT DBOTANICAL DESCRIPTION OF THE VARIETY

BURLY is an early to mid season variety of Bush Blue Lake breeding, which reaches prime green harvest stage in 67 days at Twin Falls, Idaho, compared to 69 for the variety Greenpak. BURLY has a determinate bush that is more spreading and branching than Greenpak. The pods of BURLY are very straight and remain round until advanced stages of maturity, at which time crease-backing occurs. The pods are typically 13 cm long at Twin Falls, which compares to 14 cm for Greenpak. The variety, BURLY, is unique inasmuch as the seed development is slow, even through advanced maturity when more than 60% of the pods are five sieve or larger. The pods are dark green, typical of the Blue Lake pod color and the pod eating quality is typical of the Blue Lake type. However, the flavor is milder than the typical Blue Lake flavor.

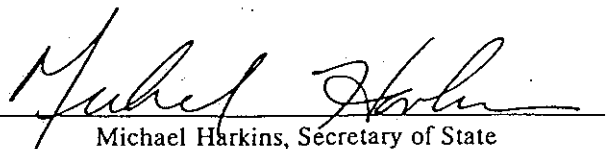
# State of Delaware



## Office of Secretary of State

I, MICHAEL HARKINS, SECRETARY OF STATE OF THE STATE OF DELAWARE  
DO HEREBY CERTIFY THAT "ROGERS BROTHERS SEED COMPANY", FILED A  
CERTIFICATE OF AMENDMENT, CHANGING ITS CORPORATE TITLE TO "ROGERS  
NK SEED CO.", ON THE TWENTY-SIXTH DAY OF DECEMBER, A.D. 1990, AT 10:01  
O'CLOCK A.M.



  
Michael Harkins, Secretary of State

AUTHENTICATION:



DATE: 10/08/1991

DO NOT WRITE IN THIS SPACE

AMENDED  
STATEMENT AND DESIGNATION  
BY  
FOREIGN CORPORATION

ROGERS NK SEED CO.

\_\_\_\_\_, a corporation  
organized and existing under the laws of Delaware,  
and which is presently qualified for the transaction of intrastate business in the  
State of California, makes the following statements and/or designation:

That the name of the corporation has been changed to that hereinabove set forth  
and that the name relinquished at the time of such change was \_\_\_\_\_

ROGERS BROTHERS SEED COMPANY

ROGERS NK SEED CO.  
(Name of Corporation)

William B. Albers  
(Signature of corporate officer)

William B. Albers, President  
(Typed name and title of officer signing)

INSTRUCTIONS:

1. If this Amended Statement shows a change of corporate name, there must be attached to this Amended Statement a certificate of an authorized public official of the state or place of incorporation, that such change of name was made in accordance with the laws of that state or place.
2. For filing this Amended Statement there is a fee of \$15.00.

*State of Delaware*  
*Office of the Secretary of State*

---

PAGE 1

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THAT THE SAID "ROGERS NK SEED CO.", FILED A CERTIFICATE OF AMENDMENT, CHANGING ITS NAME TO "ROGERS SEED CO.", THE FIFTH DAY OF MAY, A.D. 1994, AT 9 O'CLOCK A.M.



*William T. Quillen*  
William T. Quillen, Secretary of State

0810041 8320

AUTHENTICATION: 7120759

DATE: 05 16 94

13

**CERTIFICATE OF AMENDMENT**  
**OF**  
**CERTIFICATE OF INCORPORATION**  
**OF**  
**ROGERS NK SEED CO.**

Adopted in accordance with the provisions  
of Section 242 of the General Corporation  
Law of the State of Delaware

**EFFECTIVE DATE:** June 1, 1994

We, Willem van Overschot, President, and Richard B. Geller, Secretary, of Rogers NK Seed Co., a corporation existing under the laws of the State of Delaware, do hereby certify as follows:

FIRST: The Certificate of Incorporation of the corporation was filed on 2/27/75.

SECOND: The Certificate of Incorporation of said corporation has been amended as follows:

By striking out the whole of Article I thereof as it now exists and inserting in lieu and instead thereof, a new Article I, reading as follows:

**ARTICLE I**

Name

The name of the Corporation is ROGERS SEED CO.

THIRD: Such amendment has been duly adopted in accordance with the provisions of the General Corporation Law of the State of Delaware, by the unanimous written consent of all of the stockholders entitled to vote in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

FOURTH: See attached Written Consent of Sole Shareholder and Board of Directors' Resolution.

IN WITNESS WHEREOF, we have signed this certificate this 13<sup>th</sup> day of April, 1994.

Willem van Overschot  
Willem van Overschot, President

Richard B. Geller  
Richard B. Geller, Secretary



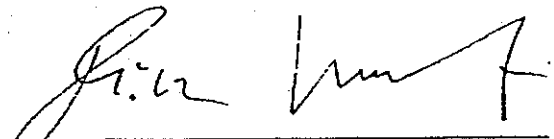
ROGERS NK SEED CO.

WRITTEN CONSENT OF SOLE SHAREHOLDER

SANDOZ CORPORATION, owner of all of the issued and outstanding shares of ROGERS NK SEED CO., hereby consents, pursuant to Section 228 of the Delaware General Corporation Law, to the adoption of the following resolution as and for the act of the shareholder:

RESOLVED, that SANDOZ CORPORATION, as sole shareholder, approves the amendment to Article I of the Certificate of Incorporation of ROGERS NK SEED CO., changing its name to **ROGERS SEED CO.**

Dated: April 22, 1994



Heinz P. Imhof,  
Chief Executive Officer  
Sandoz Corporation

100 00 34

01

15

ROGERS NK SEED CO.

**RESOLUTION**

RESOLVED, that according to Section 242 of the General Corporation Law of the State of Delaware, that Article I of the Certificate of Incorporation be amended, effective June 1, 1994, to read as follows: The name of the Corporation is **ROGERS SEED CO.**; and, further,

RESOLVED, that the appropriate officers of Rogers NK Seed Co. be, and they hereby are, authorized to take any and all further action and execute and deliver any and all further documents that may be necessary or desirable in order to carry out and effectuate fully the purposes set forth in the foregoing resolution.

ADOPTED UNANIMOUSLY BY THE BOARD  
MARCH 31, 1994

Richard B. Geller  
Richard B. Geller, Secretary

*State of Delaware*  
*Office of the Secretary of State*

PAGE 1

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"ROGERS SEED CO.", A DELAWARE CORPORATION,

WITH AND INTO "NOVARTIS SEEDS, INC." UNDER THE NAME OF "NOVARTIS SEEDS, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE TWENTY-FIFTH DAY OF JUNE, A.D. 1997, AT 9 O'CLOCK A.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel, Secretary of State

0829320 8100M  
971211787

AUTHENTICATION: 8531908  
06-26-97

DATE:

STATE OF DELAWARE  
SECRETARY OF STATE  
DIVISION OF CORPORATIONS  
FILED 09:00 AM 06/25/1997  
971211767 - 0829320

**CERTIFICATE OF MERGER  
OF  
ROGERS SEED CO.  
INTO  
NOVARTIS SEEDS, INC.**

The undersigned corporation organized and existing under and by virtue of the General Corporation Law of Delaware,

**DOES HEREBY CERTIFY:**

**FIRST:** That the name and state of incorporation of each on the constituent corporations of the merger is as follows:

**NAME**

**STATE OF INCORPORATION**

Novartis Seeds, Inc.  
Rogers Seed Co.

Delaware  
Delaware

**SECOND:** That an Agreement and Plan of Merger between the parties to the merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with the requirements of section 251 of the General Corporation Law of Delaware

**THIRD:** That the name of the surviving corporation is Novartis Seeds, Inc.

**FOURTH:** That the Certificate of Incorporation of Novartis Seeds, Inc., a Delaware corporation which will survive the merger, shall be the Certificate of Incorporation of the surviving corporation.

**FIFTH:** That the executed Agreement and Plan of Merger is on file at the principal place of business of the surviving corporation, the address of which is 7500 Olson Memorial Highway, Golden Valley, MN 55427.

**SIXTH:** That a copy of the Agreement and Plan of Merger will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.

**SEVENTH:** That this Certificate of Merger shall be effective on July 1, 1997.

Dated June 23, 1997

**NOVARTIS SEEDS, INC.**

By: Edward C. Resler  
Name: Edward C. Resler  
Title: Vice President & General Counsel